

AN INTERESTING TWO-EYED SPIDER FROM BRAZIL (TETRABLEMMIDAE).

BY C. R. CROSBY, Ithaca, N. Y.

Prof. E. J. Hambleton sent me some time ago a small collection of minute spiders taken by sifting at Viçosa, Minas Gerais, Brazil, on May 12, 1930. Among them was a series of males and females with only two eyes. In attempting to place them generically I was at first struck by their close similarity to *Tetrablemma medioculatum* Cambridge, described from a single male from Ceylon (Proc. Zool. Soc. Lond. 1873, p. 114, pl. 12, f. 1). The species resembles this *Tetrablemma* in the form of the cephalothorax, in having a tooth on the face of the chelicerae near the base, and most strikingly in the form and arrangement of the plates on the abdomen, in fact, in this respect they are almost identical. It differs in the number of eyes (2 instead of 4), in their position and in having the spiracular plates present; in *Tetrablemma* they are evidently suppressed. Another species of *Tetrablemma*, *okei* Butler (Royal Soc. Victoria Proc. n. s. 44(2): 111, 1932) was described from Victoria, Australia. Butler states that the tarsi bear three claws but does not indicate whether a pretarsus is present or not. Neither the number nor the position of the tracheal spiracles is indicated.

Another form to which this species seems most closely related is *Diblemma donisthorpii* Cambridge (Proc. Dorset Nat. Hist. Club, 29: 188, pl. A. f. 7. 1908) described from specimens found in a hothouse in Kew Gardens, original habitat unknown.

Our species agrees with this form in the number of eyes but not in their position, in the double row of inward-directed hairs on the cephalothorax and in the presence of epigastric plates; although they seem to be soldered to the surrounding sclerite and may not be functional; it differs markedly in the number and arrangement of the abdominal sclerites. Cambridge states that a pretarsus is present but does not give the number of tarsal claws.

A third genus in this group is *Hexablemma* Berland, from British East Africa (Res. Sci. Voy. Alluaud and Jeannel Af. Orient. Ar. 4: 167. 1920). It is very close to *Tetrablemma* but has six eyes. The tarsi are armed with three claws. The position of the tracheal spiracles is not indicated.

It is evident that this Brazilian species possesses a puzzling combination of the characters of *Hexablemma*, *Tetrablemma* and *Diblemma*. Rather than place it in any of these it seems best to erect for it the new genus:

Matta.

Type, *Matta hambletoni* new species.

Its distinguishing characters are given above and in the description of the type species.

Matta hambletoni n. sp.

Male. Length, 1.4 mm. Cephalothorax orange-yellow, suffused with dusky except on the top of the head, viewed from above roughly octangular, the anterior side gently convex. Behind each eye there is a row of six small stiff hairs directed upward and inward. Cephalothorax viewed from the side very high, moderately arched behind to the base of the head where it rises perpendicularly, nearly straight on top of head and gradually ascending to a point just back of the eyes. The front and clypeus slanting steeply forward in a nearly straight line, slightly convex in the middle part. Only two eyes present, white, slightly oblique, separated by $2\frac{2}{3}$ times the diameter. Chelicerae, short, stout, armed on the face near the base with very narrow, short, blunt tooth; each chelicera armed mesally above the claw with a thin semitransparent plate-like tooth, the front margin concave, the mesal angle acute. Claw of chelicera rather stout, moderately curved. Sternum broad, clear yellow orange, sparsely clothed with stiff, fine black hairs, broadly truncate in front; the margin rebordered; hind coxae separated by more than the length. Labium short, transverse. Endites short, broad, convergent, meeting in a straight line in front of the labium, front margin straight. Legs paler than body, patella yellow. Coxae globular, trochanters very short, femora compressed, tarsal claws three, borne on a distinct pretarsus; the paired claws armed with a series of three or four long teeth of nearly equal length; unpaired claw slender, moderately curved. Just below base of this claw there is a rounded bulb-like pulvillus. Spines on the tarsi and metatarsi minutely plumose. Femur of first leg armed on the inside with a double series of eight or nine stiff hairs, tibia armed retroventrally near tip with two stiff spines and on the front surface near tip there is a diagonal row of five spines, metatarsus armed below near base with one stiff spine. Abdomen ovate, covered with hardened sclerites as follows: a large convex sclerite covering the greater part of the dorsal surface, followed posteriorly by three transverse sclerites which are narrowly separated on each side from three similar very narrow pleural sclerites, on the ventral side a very large sclerite surrounding the petiole and extending far forward, containing the epigastric plates,

rounded in front, truncate behind, followed posteriorly by two transverse sclerites, the anterior one the narrower, and last by a large circum-mammillary sclerite. The tracheal spiracles are very small, oblique, located behind and a little to the side of the epigastric plates. They are very difficult to see unless the specimen has been treated with caustic potash.

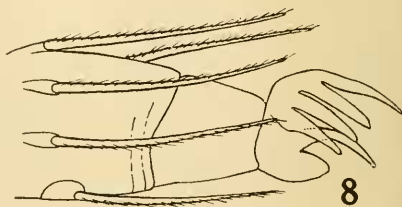
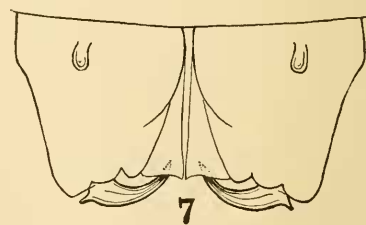
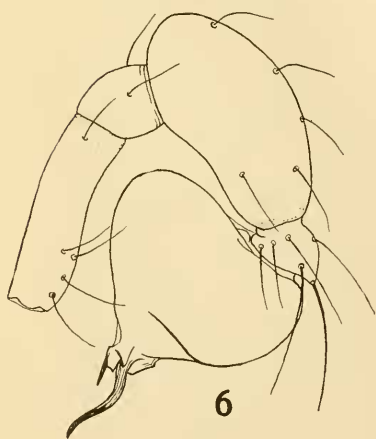
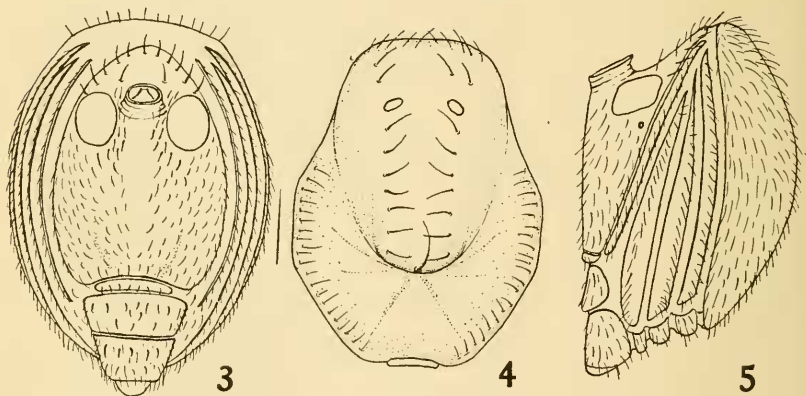
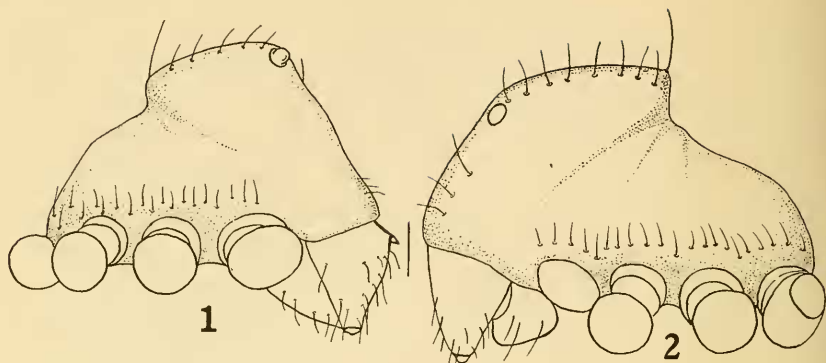
Femur of palpus a little broader at base than distally, armed at base ventrolaterally with a row of four long slender hairs and on the mesal side near tip with a pair of very small spines. Patella short, armed laterally with one fine hair. Tibia greatly enlarged, ovate, attached to the patella at the side, rounded at base, broadest in the middle, narrower distally. Tarsus very small, obliquely truncate, the dorsal margin pointed and bearing two very long, slender hairs; on each side there are two shorter hairs. The bulb extremely large, short pyriform; the seminal duct can be seen through the semitransparent integument. The embolus is terminal, black, slender, gently curved; it is accompanied by a shorter, slender, black process.

Female. A little larger than the male. Similar to the male in color. The eyes are farther forward and the clypeus is more convex. No tooth on front of chelicera. Palpi pale, slender.

Holotype, male; allotype, female. Viçosa, Minas Gerais, Brazil, May 12, 1930. 5 male paratypes. E. J. Hambleton collector. On July 6, 1933, Professor Hambleton collected 18♂, 24♀.

I am uncertain as to the family to which *Matta* should be assigned. It is evidently closely allied to *Hexablemma*, *Tetrablemma* and *Diblemma* and more remotely to *Hadrotarsus* Thorell (see Pocock, *Ann. Mag. Nat. Hist.* (7) 11: 619, 1903). In fact these four genera form a very compact natural group. They do not belong in the Theridiidae as proposed by Simon for *Tetrablemma* (*Hist. Nat. Ar.* 1: 573), and followed by Berland (1920) for *Hexablemma*, because of the nature of the respiratory system and the structure of the palpal organ. They are excluded from the Oonopidae, where Petrunkevitch (*Syst. Ar.* p. 88) placed *Diblemma* and *Tetrablemma*, because of the presence of an unpaired tarsal claw and because of the arrangement of the teeth on the paired claws, in a single, instead of a double series. In other respects they are very closely related to members of that family. In view of these considerations it seems best, for the present at least to revive for this group the family Tetrablemmidae proposed by Cambridge in 1873.

The drawings were made by Miss Helen M. Zorsch.



EXPLANATION OF PLATE.

Matta hambletoni: 1, male, cephalothorax from side; 2, female, cephalothorax from side; 3, female, abdomen from below; 4, female, cephalothorax from above; 5, female abdomen from side; 6, male, right palpus from the side; 7, male, chelicerae from in front; 8, male, tip of first leg, hairs omitted from pretarsus.

BEHAVIOR NOTES ON THE ASIATIC MANTIS
PARATENODERA SINENSIS REHN.

BY GEO. P. ENGELHARDT, Hartsdale, N. Y.

The Asiatic Mantis, now well established in many localities in New York State, is fast losing its notoriety as a dangerous, fearsome insect. Rather is it being regarded merely as one of the common, though evil looking, bugs. In the writer's garden at Hartsdale a good crop of mantids had matured early in September. Many were observed stalking and capturing crickets and grasshoppers over low ground. Others had selected fixed stations on the stalks and branches of flowering plants and shrubs, where visiting insects fell easy victims, and where they remained until the blossoms dropped off, about 10 to 14 days. No discrimination, whatsoever, was shown in the selection of their prey. Flies, bees and wasps, butterflies, all were seized with utter disregard as to defensive weapons or unpalatable qualities. A favorite abode for several of the mantids was on a butterfly bush (*Budleya*) in a sheltered corner of the garden. The principal make-up of their varied menu is indicated, even now, October 12, by the wings of butterflies scattered on the ground below. These include *Pieris*, *Colias*, *Papilio*, *Grapta*, *Basilarchia* and, most numerous, the milkweed butterfly, *Danaus archippus*. Unpalatability evidently is not recognized by the mantis, although in some instances the abdominal parts, still attached to the secondary wings, have been rejected.

Panther, the neighbors' friendly cat, loves to toy with the mantids. They try to escape by running, jumping and short flights, but finally, when cornered, they show their pugnacious nature. Rearing up they assume a defensive attitude, the spurred, grasping legs held in readiness. The cat dislikes to be pricked on the nose and so usually confines itself to gentle pawing, without real injury to the insect. It is most amusing to watch.

In color the mantids run from bright green to slaty gray. The first egg mass was noted for October 2. To-day, October 12, a pair were seen in copula on the rose ramblers.